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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,000	04/06/2004	David J. Stabile	MOTPI03US	2999
24041	7590	04/10/2006	EXAMINER	
SIMPSON & SIMPSON, PLLC 5555 MAIN STREET WILLIAMSVILLE, NY 14221-5406			HOFFBERG, ROBERT JOSEPH	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/709,000	Applicant(s) STABILE ET AL.	
	Examiner Robert J. Hoffberg	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-4, 7, 13-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johns et al. (US 3,522,486) in view of Prager et al. (US 4,288,839).

With respect to Claim 1, Johns et al. teaches a heat sink assembly within a potted (Col. 1, line 16) housing (Fig. 2A, #41), comprising: a bracket (Fig. 2A, #44) mounted to an interior surface (see Fig. 2A) of said housing; a heat-containing element (Fig. 1, #18) fully enclosed within said housing. Johns et al. fails to teach a self-tapping screw threaded into said bracket. Prager et al. teaches a self-tapping screw threaded screw (Fig. 3, #30, Col. 4, lines 46-47) into said bracket (Fig. 3, #20), engaging said heat-containing element (Fig. 3, #22), and urging said element against said bracket.

With respect to Claim 2, Prager et al. further teaches wherein said heat-containing element further comprises a heat sink (Fig. 3, #36); and, wherein said self-tapping screw is operatively arranged to urge said heat sink against said bracket. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly of Johns et al. with that of Prager et al. for the purpose of maximizing heat dissipation from the heat-containing element by providing mechanical

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contact between the element and bracket and increasing surface area with the heat sink.

With respect to Claim 3, Johns et al. further teaches a printed circuit board (PCB) (Fig. 1, #17).

With respect to Claim 4, Johns et al. further teaches an integrated circuit (IC) (Fig. 1, #18).

With respect to Claim 7, Johns et al. teaches further teaches wherein said bracket is connected to said interior surface (see Fig. 2A) with a mechanical connection (Col. 2, line 65-66). Johns et al. fails to teach that the bracket is connected by a fastener. Prager et al. teaches that said bracket is connected to said interior surface (see Fig. 3) with a fastener (Fig. 3, #43) selected from the group including rivets and threaded fasteners (Col. 6, lines 29-30). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly of Johns et al. with that of Prager et al. for the purpose of using a fastener to permanently connect the bracket to the housing.

Regarding method claims 13-16 and 19, the method steps recited in the claims are inherently necessitated by the device structure as taught by Johns et al. in view of Prager et al. as recited above in the rejection to claims 1-4 and 7.

3. Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johns et al. (US 3,522,486) in view of Prager et al. (US 4,288,839) as applied to the above claims further in view of Sloan (US 4,502,090).

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With respect to Claim 5, Johns et al. in view of Prager et al. teach the heat sink assembly in the above claims. They do not teach type of circuit or the application of the housing. Sloan teaches wherein said housing further comprises a housing (Fig. 3, #26) for a fuel pump (Col. 3, line 43). While they fail to teach the PCB comprises an oscillator circuit, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly within a potted housing of Johns et al. in view of Prager et al. for the application to be a housing for a fuel pump or any other application requiring cooling and for PCB comprise an oscillator circuit or any other circuit that the fuel pump needs requires for operation.

Regarding method claims 17, the method steps recited in the claims are inherently necessitated by the device structure as taught by Johns et al. in view of Prager et al. and further in view of Sloan as recited above in the rejection to claims 5.

4. Claim 6, 8-11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over as being unpatentable over Johns et al. (US 3,522,486) in view of Prager et al. (US 4,288,839) and further in view of Fairchild (US 6,618,255).

With respect to Claim 6, Johns et al. in view of Prager et al. teach the heat sink assembly in claim 1, above. They do not teach the bracket is made of brass. Fairchild teaches said bracket is brass (Fig. 4, line 55, copper alloy). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly within a potted housing of Johns et al. in view of Prager et al. with that of Fairchild to manufacture the bracket using a good thermal conducting material.

With regard to Claim 8, Johns et al. teaches a heat sink assembly in a potted (Col. 1, line 16) housing (Fig. 2A, #41) for a fuel pump, comprising: a bracket (Fig. 2A, #44) connected to an interior wall (see Fig. 2A) of said housing; a printed circuit board (PCB) (Fig. 1, #17), said PCB fully enclosed (see Fig. 2A) within said housing. John et al. fails to teach a brass bracket, a heat sink and a self-tapping screw. Prager et al teaches a heat sink (Fig. 3, #36) and a self-tapping screw (Fig. 3, #30, Col. 4, lines 46-47) threaded into said bracket (Fig. 3, #20), engaging said PCB (Fig. 4, #11), and urging said heat sink against said bracket. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly of Johns et al. with that of Prager et al. for the purpose of maximizing heat dissipation from the heat-containing element by providing mechanical contact between the element and bracket and increasing surface area with the heat sink. Fairchild teaches a brass (Col. 4, line 55) bracket (Fig. 1A, #16) connected to an interior wall of said housing (Fig. 1A, #12). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly within a potted housing of Johns et al. in view of Prager et al. with that of Fairchild to manufacture the bracket using a good thermal conducting material.

With respect to Claim 9, Johns et al. further teaches an integrated circuit (IC) (Fig. 1, #18).

With respect to Claim 10, while Johns et al. in view of Prager et al. and further in view of Fairchild fail to teach the circuit is an oscillator, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat

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sink assembly of Johns et al. in view of Prager et al. and further in view of Fairchild for the purpose of incorporating an oscillator or any other circuit needed for operation of the fuel pump.

With respect to Claim 11, Johns et al. further teaches that said bracket is connected to said interior surface (see Fig. 2A) with a mechanical connection (Col. 2, line 65-66). Johns et al. fails to teach that the bracket is connected by a fastener. Prager et al. teaches that said bracket is connected to said interior surface (see Fig. 3) with a fastener (Fig. 3, #43) selected from the group including rivets and threaded fasteners (Col. 6, lines 29-30). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly of Johns et al. with that of Prager et al. for the purpose of using a fastener to permanently connect the bracket to the housing.

Regarding method claims 18, the method steps recited in the claims are inherently necessitated by the device structure as taught by Johns et al. in view of Prager et al. and further in view of Fairchild as recited above in the rejection to claims 6.

5. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over as being unpatentable over Johns et al. (US 3,522,486) in view of Prager et al. (US 4,288,839), further in view of Fairchild (US 6,618,255) and further in view of Murphy et al. (US 5,504,653).

With regard to Claim 12, Johns et al. teaches a heat sink assembly in a potted (Col. 1, line 16) housing (Fig. 2A, #41) for a fuel pump, comprising: a bracket (Fig. 2A, #44) connected to an interior wall (see Fig. 2A) of said housing; a printed circuit board

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(PCB) (Fig. 1, #17), said PCB fully enclosed (see Fig. 2A) within said housing. John et al. fails to teach a heat sink, a self-tapping screw, a brass bracket, a rivet and an oscillator circuit. Prager et al teaches a heat sink (Fig. 3, #36) and a self-tapping screw (Fig. 3, #30, Col. 4, lines 46-47) threaded into said bracket (Fig. 3, #20), engaging said PCB (Fig. 4, #11), and urging said heat sink against said bracket. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly of Johns et al. with that of Prager et al. for the purpose of maximizing heat dissipation from the heat-containing element by providing mechanical contact between the element and bracket and increasing surface area with the heat sink. Fairchild teaches a brass (Col. 4, line 55) bracket (Fig. 1A, #16) connected to an interior wall of said housing (Fig. 1A, #12). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly within a potted housing of Johns et al. in view of Prager et al. with that of Fairchild to manufacture the bracket using a good thermal conducting material. Murphy et al. teaches a rivet (Fig. 5, #41) connecting the bracket (Fig. 5, #13) to the housing (Fig. 5, #40). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly within a potted housing of Johns et al. with that of Murphy et al. for the purpose of using a rivet to permanently fasten the bracket to the housing. While Johns et al. in view of Prager et al., further in view of Fairchild and further in view of Murphy et al. fail to teach the circuit is an oscillator, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the heat sink assembly of Johns et al. in view of Prager et

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al., further in view of Fairchild and further in view of Murphy et al. for the purpose of incorporating an oscillator or any other circuit needed for operation of the fuel pump.

Regarding method claims 20, the method steps recited in the claims are inherently necessitated by the device structure as taught by Johns et al. in view of Prager et al. further in view of Fairchild and further in view of Murphy as recited above in the rejection to claims 12.

Response to Arguments

6. Applicant's arguments with respect to claim 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding Sloan, Sloan is being used as prior art only to teach a fuel pump with a potted housing. Apparatus claims must be structurally distinguishable from the prior art. MPEP 2114. The fuel pump is a functional and not a structural element. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997).

Applicant's arguments regarding Fairchild, Fairchild is being used as prior art only to teach a bracket made of brass as an alternate to a bracket made of aluminum taught by Johns.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

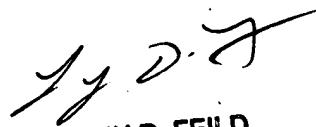
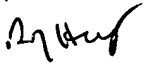
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJH



LYNN D. FEILD
PRIMARY EXAMINER